

The artistic-symbolic approach of Modern Greek Urban Cartography [1840-1920]

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Abstract. As an issue, the artistic versus the scientific approach in cartography and cartographic design, has concerned the cartographic community quite seriously; it is definitely included in the objects open to exploration, even though it is not characterized as one of the front line hot research topic. The production of urban Cartography in modern Greece began with the preparation of the first urban plans, concerning the creation and planning of the first cities of the new country at the beginning of the 19th century signaled. However, each time a map was designed, a different approach of 'cartographic style' was formed in terms of aesthetics and time line. Artistic movements in Art and Civilization like romanticism, neoclassicism, art nouveau, modernism or other "movements" like Bauhaus, seem to influence, among other things, graphic representations like maps and more particularly, urban plans. Varying from simplistic urban plans designed in a subtractive way merely depicting the design, to compound depictions of an extended semiological depiction, these 'plans' are historically categorized in four time periods, each one distinctive in terms of occasional aesthetic movements. This paper is intended to examine the trends depict in plans produced during the first period, going from 1840 to 1920, considered as the "golden era" of the modern Greek urban cartography.

Key words: urban cartography, cartographic design, cartographic styles, cultural- artistic approach

1. Introduction

The foundation of the Neohellenic State in the 19th century involved an intensive modernization program. The establishment of a new network of settlements and the reconstruction of cities was placed at the heart of modernization policies, undertaking for over three quarters of century. In this

context, city form acquired a crucial importance: it served practical and functional purposes as well as aesthetic and ideological ones. Not only was production and economic activity to be stimulated, a national identity had to be emphasized and ideals of citizenship had to be promoted among Greece's inhabitants. Urban modernization, placing the accent on the formal aspects of the city, seems to have served a threefold purpose for Greece all that time: it ensured a link with the west, it consolidated the transition to an urban society by effacing all traces of an embarrassing past of foreign rule, ethnic and religious oppression, and social and economic backwardness; and it restored the nation's historical continuity by connecting the modern kingdom with the ancient world. From the ambitious early designs to the utilitarian and unadorned grid plan produced after 1880 for dozens of small and large cities, one can trace an insistent dedication to this aim (Hastaglou-Martinidis 1995).

2. The debate between Art and Cartography

Throughout the development of cartography, there are considerable links between art and cartography. Not only during those periods when maps were compiled by high skilled engravers and artists but afterwards as well. Even during the high scientific period of cartography (last decades of the 20th and the 21st c.) the map compilation is highly related to map's appearance as far as the symbols and the layout are concerned. Although cartography has been captivated by science, during the map compilation the cartographer is called to be imaginative and creative in order to find graphic solutions to design issues to produce a 'good map design'. It is absolutely clear that the cartographic theory along with the cartographic practice and tradition admit much less freedom to the cartographer than art admits to the artist, but the map design challenges for effective solution in case of graphical issues.

Cartography has gained benefits from science concerning the fields of map projections, communication, color vision, color theory, optics, visual perception and psychology, but so is art. Many artistic movements such as impressionism, neo impressionism, pointillism, fauvism, modernism were based on the scientific knowledge issued by the color theory, the trichromatic theory of color vision, the opponent process theory.

Historically, the map forms vary according to the general concepts that govern the visual means. The mappae mundi, the portolans of the 13th c., the Dutch maps of the 17th c., the Swiss relief maps are all samples of how the dominant concepts influence graphics. The most exceptional example of all

is the London's underground map which follows the Art Deco concepts of 20's and 30's.

Many cartographers have been engaged in the study of the relation between art and cartography through several points of view, and it is a fact that their professional origin and background is playing a critical role. But it is broadly admitted that the cartographic products carry the requirements of being 'attractive' and 'balanced', as well as functional and effective. Attractiveness and balance are attributes related to artistic characteristics. The cartographic literature has been occasionally engaged in the issue of whether cartography is more science than art or the contrary. Consequently, the question is whether art or science is the major ingredient of the creation of the rules of cartographic design. Keates and Wood are among those cartographers who are in favor of art, where Robinson stands on the antipodes. In the following paragraphs, some views relative to the subject are set forth.

In 'The look of maps' Robinson (1952) refers to Cartography as 'a visual technique' and argues about the appearance of the map in relation to its quality, questioning whether the pleasant appearance makes a map 'a good map'. He, first of all, raised the issue that the map symbolization should be based on a more objective approach. Although he mentions the aspects of other cartographers that cartography is a kind of meeting place of science and art, he almost deposes the contribution of art to ornamentation and to the 'joy of creation' in mapmaking. Robinson's influence focuses on the employment of scientific principles related to spatial knowledge and visual stimuli for the creation of effective maps, designating the transition of interest from graphics design and production to the map's functionality and effectiveness.

From another point of view, Keates (1984) claims that 'if cartography should ever be reduced to some collection of scientific rules' he would have no further interest in it. Although he does not ignore nor deposes the role of science in cartographic communication, he gives prominence the role of art, considering that cartography is an applied art (Keates 1996). He claims that map is an artifact and both art and science are required in its production and apposes views supporting the practical and the artistic approach of the map. In order a map to be a 'good' map, two qualities must be served: the content integrity and the expression, which encapsulates the aesthetic appeal. Keates considers that design must be an inherent function and not be dealt separately, in order to achieve the desired unity of form and content. (Keates 1996). One of the most interesting parts of Keates' consideration is the interrelations he is making between various art forms and maps. Survey plans have visual and conceptual similarities with outline sketches, the hatching patterns used in cartographic symbolization resample the line

shading in drawings, the graphic value of colour is important both in maps and paintings.

3. The maps and city-plans as an artistic product

3.1. "Artistic variables"

It turns out that the artistic component of any map product is related to aesthetics and design. Imhof's statement that *legibility, clarity, balance and harmony are among the prerequisites to a 'good map'* is emphasizing the involvement of

- (a) aesthetics, which refers to appeal and attractiveness, thus the visual quality and
- (b) design, which refers to the map structure together with the related 'artistic work'.

The issue of the 'good map' leans on the efficiency of the communication - meaning that the purpose of 'function' is achieved- integrated into map composition. The map composition involves the lay out, the figure ground organization, the symbols, the colors' arrangement, the lettering and the visual balance, all being part of the map design. Every decision made during the map design process, affects the map as a whole. The symbols design, the chosen colors, the lettering employment, the arrangement of the map elements, they all have consequences to the map's appearance and functionality.

Although Robinson (1952) questioned the role of art in cartography, he refers to map design, lettering and color, as of critical importance in the improvement and refinement of the used graphic techniques.

Ortag (2009) brings in the 'Variables of Aesthetics in Maps' by putting to the judgment of the public (experts and non experts), specific elements of the cartographic design of topographic maps, in order to specify the factors which affect the evaluation of beauty. In the specific research, the preference rate of those factors is: *color, legibility/clarity, relief 3-d impression, lettering, contrast, total impression, content, line symbols, realistic/naturalistic impression* and finally *lightness*.

The artistic component of map design regards the skills required to execute drawings and arrangements as Castner (1990) mentions. All variables issued by Ortog are visual in nature and they form the final result of the cartographer's efforts with graphic means of expression. As Keates (1995) points out 'The frequent references to artistic skill in cartography suggest

that some consideration is also present, but there is rarely any attempt to define it in more specific terms.' Additionally he makes the important statement, that since 'the representation of information in map form is graphic' the map must be considered 'as an artistic work'. Because of map primary aim is to be useful, it cannot be considered as pure or fine art, but its perfect appearance is expected concerning technical aspects.

The prime factor affecting the artistic work of map composition is the cartographer's *creativity*. The management of map graphics require graphical solutions that will prove to be effective not only to the narrow space an issue may occur but to the global map extent and they also determine the map's appearance.

The *layout* as part of the *overall design* is equivalent to *form*, which in cartography is restricted in the geographic sense, whereas in representational art may play one of the most important roles.

The *color* employment is critical, not only forming the symbols but establishing harmony, balance, contrast and the figure ground organization. What pops up, what draws away, what is clear or vague, what is light or dark, what is different or similar, depends mainly on color. From an artistic point of view, color is a powerful mean of pictorial expression and motivates the viewer's emotions.

The *lettering*, the *line work* along with the *symbols design* in general, not only portray the geographic information but they determine the map's clarity and legibility as well, features which are intrinsic to the map quality. The aforementioned elements of cartographic symbolization in relation with the nature of the geographic information and the appropriate symbolization methods require artistic skills in choice and combination for a legible end result.

3.2. Cartographic "styles"

As Benová & Pravda (2009) notice, "if we agree with the definition of a map as a picture, we must then accept that we can take note of such map properties which evoke in human some feelings, emotions – like paintings do". The archetype of the neoclassical city planning concentrated in "pour le plaisir des yeux" which means that we can find maps, as well as city plans, that are often published and displayed in the same way as paintings.

According to Benová & Pravda (2009) two groups of map stylistical features can be distinguished:

- the graphical elements of the plan, understood as groups of graphical elements, and

- the components in the surrounding of map field which determine the actual style of every map (in our case a city plan).

We may distinguish two styling factors, the “map theme” and the map “purpose”. The first influences the map composition, leading the actual map appearance. The second one reveals the expression of a given specific intent.

We can also notice the effect of the “technical facilities” related to various painter’s – architect’s techniques, the “scientific ability” concerning the creator, the “approach to map theme” related to the selection of graphical features, and finally the “subjective proclivities” coming mainly from the field of artistic styles.

According to Benová’s and Pravda’s “Map style classification” we distinguish historical and contemporary map styles (Pravda 1997, 2003).

The above mentioned “artistic variables” and “cartographing styles” could help us to understand better the designing concepts of the Greek Urban Cartography.

4. The neoclassicism as an aesthetic approach of city planning and Urban Cartography

In a given medieval German town, for example, the urban order – mainly syntagmatic, i.e., the relationship of dominating contiguity– is related to church, feudal system and corporate artisanship. The form of an individual house and its position along the ribbon of the street situated its occupant in relation to the dual transcendence of the cathedral and the castle – and at the same time individualized him within a community of secular tasks. Every urban plan was a direct projection of the objectives of clergy, feudal, lord or merchant guild.

During the Neoclassical period, the urban order no longer had this all inclusive significance. The role given in neoclassical planning to the satisfaction of the eye destroys the former sense of intimacy, and the city is transformed into a spectacle. Nonetheless, the radial avenues, as well as the vantage points from where they originated and to where they terminated, were still designed with reference to the established power, although in a new form, at the same time as they incorporated the knowledge of the period – since Neoclassical esthetics cannot be understood when disconnected from the contemporaneous science. Vauban et le Nôtre were at once the King’s planners and disciples of Galileo and Descartes. In short, the relationship

between the urban system and other concurrent systems was still implicitly accepted both by the inhabitant and the planner.

The Neoclassical form and its monuments, its broad avenues lined with uniform buildings, its parks, its love for vistas geometry, remained meaningful, in Western and Central Europe, until the 1830's, deteriorating into formalism by the end of the century. It continued to be used in this creation, extension and embellishment of cities (plan of Hygeia). Thus Washington was built on the plan of L' Enfant and Detroit's -plan based on the same esthetic principles. In Paris, Napoleon I was the "executor" of the Old Regime's will, and urban projects were designed essentially to please the eye and to complete the Neoclassical – Baroque composition according to Louis' XV dream of the place.

Similar fragmentary efforts are depicted in the "regularization" of certain quarters in other European cities, such as Brussels and Dresden.

But we have to notice that Urbanists (Architects and Engineers) in charge of "regularization" not only drafted projects but also discussed them in an abundant literature that included their comments and theories. The 19th century is the century of criticism: in the case of city planning, there is a definitive correlation between the semantic impoverishment of the urban system itself, and the appearance of theoretical treatises preceding and justifying various practical proposals.

4.1. The Greek neoclassical city planning period (1830-1920)

"The leading figures in the efforts to consolidate the neoclassical urban planning are at first the politicians....After them come various categories of technical teams: engineers or architects, the contractors and "geometers" of the period, and possibly others who lacked special expertise...these men were, variously inspired, brilliant or lacking in imagination....last in the series comes the ultimate recipient –the inhabitant, as a unit and as a collective"... "The work of the plan creators was not easy: at a time when technical means were limited and information non-existent, these men had to work on the spot in order to survey and record what existed and to render it faithfully on maps". These maps served as the basis for their town plan. "The town plans produced in this way, were either rather like embroideries, containing large numbers of valuable details, or routine maps that ranged in quality from indifferent to crude. They were town maps, however, and this was the important thing at the time, since such maps were the ticket to the future. Even today, the town maps of that period have retained if not increased their value" (Filippidis 2007).

The main institutional frame concerning the modern Greek urban cartography was formed in May 15, 1835 “about the hygienic construction of cities and towns”, considered by Lavedan (1952) as “fact of first class”.

French and Bavarians were the first to design the “new” Greek cities. Their urbanistic principles were simple:

- orthogonical alignment for the good function of the city, the economic solution, the aesthetic result and above all the concept of the city, as a symbol
- the prioritization of the road network
- the demarcation of institutional buildings (parliament, royal palace, cathedral etc) with parks and gardens
- tree planting
- house blocks

The traditional organic plan without any regularity, with narrow streets and small properties, was replaced by the imported western neoclassic model representing the dialogue between History, art, education, national conscience and globalization and was expressed by the systematic organization of the settlements.

Among the first foreigner experts, invited by the first government, we must mention: Garnot, De Vaud from France, Edouard Schaubert, Leon von Klenze, von Weiler and Fr. Stauffert from Germany.

The most famous Greek planners of the period were Voulgaris, Vallianos and Kleanthis.

The common characteristic of all those Architects, Geodesians and Engineers was their familiarization with the principles of the neoclassical trends and those of the city planning of the absolutism era.

This period could be devised in two sub-periods:

- The first one (1828-1831), the so-called Kapodistrian period, related to the first governor of Greece Ioannis Kapodistrias.
- The second period coincides with the Otto’s Kingship, first King of Greece (1833 – 1862).

We may add a third period from 1863 to 1920, which is marking the end of the neoclassical period with the plan of Thessaloniki.

During the second period the task is the exploitation, on a symbolic level, of the ancient heritage: the design of the city plans attempts to integrate the ancient ruins and the archeological findings into the concept of the plans.

Noteworthy is the location of the royal palace and of other main institutional complex at the cross point of the great road axis in order to emphasize the power of the royal authority and the derived institutions.

4.2. The neoclassic city planning as an ideological mechanism during the establishment of the Modern Greek State

During the first period of the Modern Greek State history, the dream for the future has been identifying with the so called Europeanization, which means the total break with the recent past. The multiple and, perhaps, invisible connections with the Turkish Domination had to be forgotten.

The imported architectural characteristics of the so called “Greek neoclassism” were imposed and established as the dominant aesthetic choice. “As it was a very trendy courant in Western Europe the neoclassism connected, formally and visually, Athens with other European cities, which the new capital desired to copy: using the apparent references to the ancient Greek past, Greek neoclassism documented the return, the revival, to the Greek Architecture, to the place of its origins” (Bastea, 1997).

So Athens (and other Greek cities) was designed according to plans and maps of other cities: those of Ancient Athens and some modern European cities.

It is to notice that the European neoclassism, in its whole, has its origins in the Enlightenment and the economic (industrial revolution) and political (French revolution) transformations imposed in the large urban centers of England, France, Germany and Italy, starting in the 18th c. Connected to the matter of the formation of National States (derived from the French Revolution) the choice of the “neoclassic option” seems to be a very appropriate solution in this time.

5. The bipole of the neoclassic Greek city-plans

5.1. The plan of Athens

The original plan of the city was designed by Stamatios Kleanthis and Eduard Schaubert in 1833. The provisional Greek government of the time assigned to the two young Architects to design Athens. As Kleanthis reported later, the plan had to be “equal to the ancient glory and splendor of the city and worthy of the country we live”.

The two Architects designed the new capital having in mind the urbanistic prerogatives gardens of the early 19th c. neoclassic city.

The apparent geometry of the plan serves the differentiation of the new city towards the rambling cities of the Ottoman period. The pass from the Ottoman occupation to the independence and the closer relations with the west European cities was relevant on the plan and furthermore on the territory. "The right lines and angles became the symbols of the national independence". The building blocks replaced the traditional, national minority neighborhoods of the prerevolutionary era.

The basic concept of the whole composition is based on rectangular isosceles triangle with the Royal Palace situated on the top of the right angle. The Royal Palace is the center of the whole composition, having on each side the two parliaments: the Senate and the House.

The remaining antiquities are carefully integrated in the geometric ensemble and are usually used as "points de vue", and points "de repère" for the orientation of the street and the walkers. The aim of the two Architects is not only the aesthetic unification of the ancient and the new city but also to create a place of teaching, a center of moral education, a natural museum (Filippidis, 1984).

The principal points of the plan of Athens:

- The characteristic triangular – radial layout of the plan according to the urban patterns of the Enlightened Absolutism of the 18th c. (plans of St Petersburg, Versailles, Karlsruhe): the principal axes begin radially from the seat of the royal authority, the Royal Palace, in a form called "patte d'oie".
- The direct visual connection of the symbolic points of the city (the main axis connecting the Propylees of Acropolis with the Royal Palace).
- The main streets are disposed in a triangular way. The disposition allows the creation of different orthogonal road – networks, disposed in a diagonal layout. In this way different, independent quarters, even neighborhoods, are created.



Figure 1. Plan of Athens

This rigid disposition of the new plan counterbalance with the free, daedalus, spontaneous “plan” of the ancient city, creating an interesting contrast on the plan in the city itself. Left, consciously, as it was, this part of the city could be the “terrain par excellence” of the archeologists and the archeological diggings for the years to come, a “à la recherché” of the Ancient Athens.

The Kleanthis – Schaubert plan of Athens has different kinds of graphic scales, a diagonal grid, lightly visible, not orientated to the north but with a great prominence of the natural environment (mountains and hills, rives and ravines). The colorist approach of the design is very interesting, using a rich range of pastel – ochre water colors. The result is a romantic oriented plan which keeps a good balance of lines, surfaces and colors.

The most important city plans of this period are those of Corfu (1868) and Volos (1888).

5.2 The plan of Thessaloniki

The new plan of Thessaloniki (1918), after the great fire of 1917, which destroyed the major part of the city, is the most important urbanistic operation at the closing of the neoclassical era in Greece (Karadimou-Yerolymou 1995).

An international committee, formed by Architects, Archeologists and Engineers, under the leadership of the French Architect Ernest Hembrard, proposed an interesting “transfer” of the most prevalent and dominant principles for the city design with respect to its geographical and historical peculiarities to the new plan of Thessaloniki.

The plan of the city is based on the neoclassical tracings (axis, diagonals, monuments as points – junctions), the gathering of the public services and the creation of a “civic” center as well as the location of productive activities and the prominence of the Roman and Byzantine monuments of the city.

The core of this “civic” center is shaped by two great squares joined by a large avenue, vertical to the seafront, leaving free the view to the sea and the predominant volume of mount Olympus (Dwelling of the Gods) (Lavedan 1921).

It seems that Hebrard and his team used a complex of “codes”, designing Thessaloniki: economic codes, ecological codes, functional codes, circulation codes and others. The topographical codes appear in two different ways. Used as a practical code, the emphasis is on the thesis that the city must be adapted to the natural conditions of its site. Simultaneously, when it functions as a denotative code, this landscape is viewed as offering a scenic setting for the city, so that the topographical code also activates a conative aesthetic code (Lagopoulos 2005).

Hebrard reconstituted the Hellenistic grid system and used it as a basis for the new plan, so that the new street system was, as Lavedan (1933) writes, “dictated by the past”. Hebrard’s plan displays the Byzantine churches, by clearing the space around them, relating them to especially designed axes and making them nodal points of his plan, both aesthetically and from the point of view of the street pattern.

Hebrard seems to try something more than the “synthesis” of the bipolic (Hellenistic grid and Byzantine nodal points), by adding an oriental aspect as another significant connotation. This “Orientalness” would be limited to the “upper city”, but it could also color the symbolic identity of the whole central area. Thus, his view of the plan balances precariously between East and West (Lagopoulos 2005).

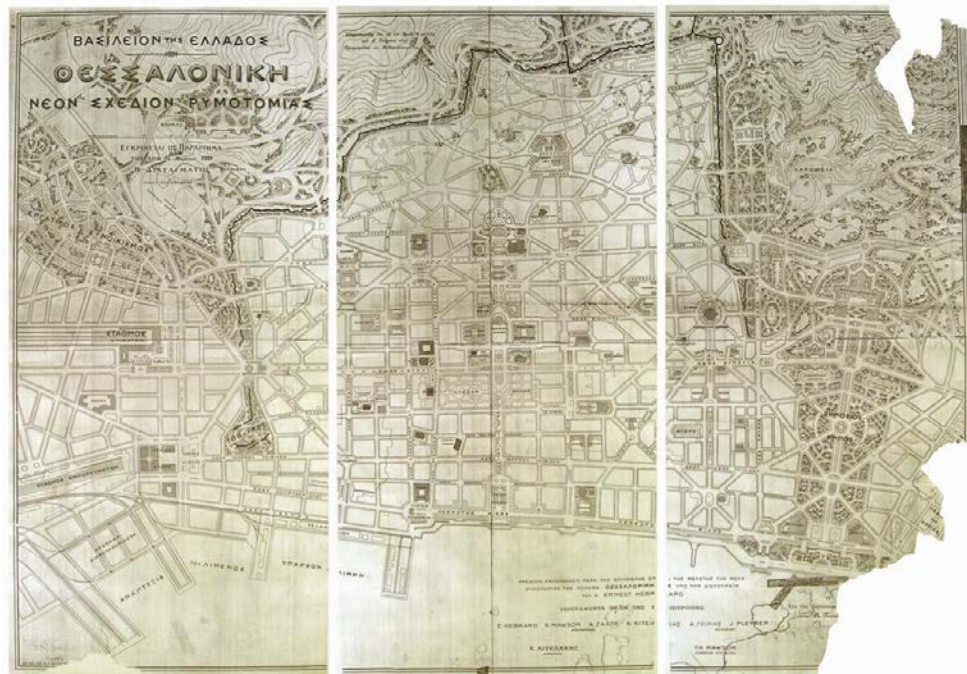


Figure 2. Plan of Thessaloniki

In the case of Hebrard's plan of Thessaloniki there is a similar to Athens plan, graphic approach with a greater emphasis to the urbanistic pattern (building blocks and streets) and the design of green and open spaces as well as the ideas of the design of the 19th century's city – gardens. There is no grid, no sign of orientation and the placing of the city on the plan gives the impression that the port of the city is oriented to the south although is oriented to the west. There is a numeric and a graphic scale (1:2500) but there is no color attempt and the graphic differentiation is coming only from the different design patterns.

The plan of Thessaloniki seems to conclude the neoclassical period and open the “modern” period of the Interwar.

6. Reflections and conclusions

Closing this paper an interesting question may be posed: was the symbolic identity involved in the production of the plan also successfully realized in the reception?

According to Leontis (1998) the neoclassical wave of Western Hellenism was reworked on its arrival in Greece into “Neohellenism”, which constructed an imaginary community, rooted in an equally imaginary territory, a place felt to be a prerequisite for the existence of the nation and its fulfillment.

Neohellenism was not a unified ideological complex. The “Neohellenistic” ideology was outward – directed, resulting from the assimilation of the imported idealizing and antiquarian ideology of Western Hellenism. This neoclassicist ideology is founded on the idea of a direct continuity of modern with ancient Greece.

The plans of Athens and Thessaloniki were not the only neoclassical plans in Greece. In the context of the neoclassicism of the 19th c., a multitude of plans of Greek cities and towns were prepared by both Greeks and foreigners. These plans were not implemented in their entirety, not even gradually. However, through the spirit, their piecemeal realizations and continuous adjustments, they dictated the development of urban space in modern Greece.

The neoclassical plan in Greece affirms a double ideological function: one positional and one oppositional. The oppositional aspect is the rejection of the ottoman city. The positional involves the affirmation of both the community with ancient Greece and the bonds with European culture.

In this manner, the urban plans of the 19th c., became the vehicle of a common and major ideological locus, a locus that was, and still is, a major focus of all forms of discourse in Greece, political, scientific, everyday, literary and certainly artistic.

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